

IN THE CLAIMS:

1. (Currently Amended): A thermostat failure diagnosis method comprising the steps of:

using a first cooling water temperature measured during a start of an engine, an intake air temperature measured during the start of the engine, and a first intake air quantity measured during the start of the engine as factors to determine whether a thermostat failure diagnosis condition is met, and only if said thermostat failure diagnosis condition is met:

~~measuring an intake air quantity and a cooling water temperature;~~

determining a ~~standard~~ time period based on the first intake air quantity and the first cooling water temperature;

counting down ~~until the standard time period reaches zero~~ from said time period to zero by a plurality of steps;

wherein if a second intake air quantity, measured during said counting down, differs from said first intake air quantity, said time period is re-determined, said re-determining comprising comparing the time period remaining after the countdown, just before the second intake air quantity was measured, with another time period determined in response to the second intake air quantity and a second cooling water temperature that corresponds to the second intake air quantity, and to continue the counting down step using a larger one of the time periods;

detecting a third cooling water temperature and storing same when the ~~standard~~ time period reaches zero;

correcting a target temperature accounting for the influence of a head wind; and

comparing the ~~stored~~ third cooling water temperature with the corrected target temperature to determine whether or not a thermostat has failed.

2-5. (Canceled).

6. (Currently Amended): The method as defined in claim 1, wherein the correcting step further comprises the steps of:

calculating an average vehicle speed;

determining a correction constant in response to the intake air temperature and the average vehicle speed; and

multiplying the correction constant by the target temperature to determine the corrected target temperature.

7. (Currently Amended): The method as defined in claim 6, wherein the correction constant is stored in a map table ~~such that the correction constant~~ and is based on the intake air temperature and the average vehicle speed.

8. (Currently Amended): The method as defined in claim 1, wherein the thermostat failure diagnosing step further comprises a step of determining that the thermostat has failed if the ~~stored~~ third cooling water temperature is less than the corrected target temperature, and determining that the thermostat is functioning properly if the ~~stored~~ third cooling water temperature is above the corrected target temperature.